AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) ~~Method~~ A method for three-dimensionally determining ~~the~~ a refractive index of a transparent or partially transparent layer ~~layers~~ via transmission ellipsometrie, comprising: ~~wherein~~

inserting the layer in an immersion medium which has a higher refractive index than air;

irradiating the layer ~~is irradiated~~ with polarised light at different angles of incidence; and ~~, and wherein~~

measuring and evaluating variations in the polarisation of the light ~~are measured and evaluated~~ as the light passes through the layer ~~, characterised in that the measurement is carried out through an immersion medium which has a higher refractive index than air, and between which the layer is inserted~~.

2. (Currently Amended) ~~Method~~ A method according to ~~Claim 1, characterised in that~~ claim 1, further comprising applying the layer ~~is applied~~ to a transparent substrate, wherein the measuring is ~~and is measured~~ on the substrate.

3. (Currently Amended) ~~Method~~ A method according to ~~Claim 2, characterised in that~~ claim 2, further comprising using a refractive index of the ~~an~~ immersion medium ~~is used with a refractive index~~ which [[is]] at least corresponds approximately to a refractive index of the substrate.

4. (Currently Amended) ~~Method~~ A method according to ~~Claim 1, characterised in that~~ claim 1, further comprising inserting a liquid immersion medium into a chamber, wherein the measuring is in the chamber, ~~the layer is measured in a chamber into which is inserted a liquid immersion medium.~~

5. (Currently Amended) ~~Method~~ A method according to ~~Claim 1, characterised in that~~ claim 1, further comprising forming the immersion medium ~~is formed by~~ with two solid body halves between which the layer is inserted.

6. (Currently Amended) ~~Method~~ A method according to ~~Claim 5, characterised in that~~ claim 5, further comprising using two hemispheres or hemi-cylinders ~~are used~~ as the immersion medium.

7. (Currently Amended) ~~Method~~ A method according to ~~Claim 6, characterised in that~~ claim 6, further comprising supporting the two hemispheres or hemi-cylinders ~~are supported by~~ with capillary forces on the layer and the substrate.

8. (Currently Amended) ~~Method~~ A method according to ~~Claim 1, characterised in that~~ claim 1, further comprising determining a complex refractive index by irradiating the layer ~~is irradiated~~ simultaneously or consecutively with light of different wavelengths ~~in order to determine the complex refractive index~~.

9. (Currently Amended) ~~Method~~ A method for ~~according to Claim 1 for~~ measuring ~~layers~~ layers for flat screens, optical data storage or optical wave guides comprising: utilizing the method according to claim 1.

10. (Currently Amended) ~~Device~~ A device for carrying out the method according to ~~Claim 1,~~ claim 1, comprising:

~~with~~ a transmission measuring device for measuring a variation in polarisation as ~~the~~ polarised light passes through a sample; and

a rotating device for rotating the sample, ~~characterised in that~~ wherein the rotating device comprises:

an immersion medium which has a higher refractive index than air, and

a support for the immersion medium ~~is provided and is designed~~ so that the sample ~~can be inserted~~ is insertable within ~~between~~ the immersion medium and ~~can be rotated~~ the sample is rotatable in or with the immersion medium relative to a beam axis of the polarised light.

11. (Currently Amended) ~~Device~~ A device according to ~~Claim 10, characterised in that~~ claim 10, wherein the support ~~is~~ comprises a chamber for a liquid immersion medium, ~~which has~~ the chamber having inlet and outlet surfaces for the polarised light.

12. (Currently Amended) ~~Device~~ A device according to ~~Claim 11, characterised in that~~ claim 11, wherein the chamber comprises ~~is designed in~~ a cylindrical shape and is connected to the rotating device so that ~~it can be rotated~~ the chamber is rotatable by ~~means of~~ the rotating device.

13. (Currently Amended) ~~Device~~ A device according to ~~Claim 10, characterised in that~~ claim 10, wherein the support ~~is designed for receiving~~ is connected to the rotating device, wherein the support receives and ~~fixing~~ fixes two solid body halves, the two solid body halves forming the immersion medium ~~and is connected to the rotating device~~.